

IN THE CLAIMS:

1-7. (Cancelled)

8. (Previously Presented) The method for producing the semiconductor light emitting device of Claim 9, wherein the single-crystal silicon substrate has a (111) crystal plane as a principal plane.

9. (Previously Presented) A method for producing a semiconductor light emitting device comprising the steps of:

- (a) forming an insulating layer on a single-crystal silicon substrate;
- (b) forming a gallium nitride type compound semiconductor layer as a buffer layer on the insulating layer;
- (c) stacking on the buffer layer in sequence a lower cladding layer, an active layer, an upper cladding layer, and a cap layer, these layers being made of the gallium nitride type compound semiconductor;
- (d) exposing a predetermined surface of the buffer layer by etching perpendicularly to the single-crystal silicon substrate;
- (e) forming electrodes on both the cap layer and the predetermined surface of the buffer layer exposed by the etching treatment in step (d), whereby obtaining a semiconductor wafer having multilayer structure; and
- (f) separating the semiconductor wafer to chips by dicing or by cleaving,

wherein the step of forming the insulating layer is implemented by removing an oxide film over the single-crystal silicon substrate and forming a silicon nitride layer by heating under an atmosphere of nitrogen gas.

10. (Previously Presented) A method for producing a semiconductor light emitting device comprising the steps of:

- (a) forming an insulating layer on a single-crystal silicon substrate;
 - (b) forming a gallium nitride type compound semiconductor layer as a buffer layer on the insulating layer;
 - (c) stacking on the buffer layer in sequence a lower cladding layer, an active layer, an upper cladding layer, and a cap layer, these layers being made of the gallium nitride type compound semiconductor;
 - (d) exposing a predetermined surface of the buffer layer by etching perpendicularly to the single-crystal silicon substrate;
 - (e) forming electrodes on both the cap layer and the predetermined surface of the buffer layer exposed by the etching treatment in step (d), whereby obtaining a semiconductor wafer having multilayer structure; and
 - (f) separating the semiconductor wafer to chips by dicing or by cleaving,
- wherein the step of forming the insulating layer is implemented by growing a layer of aluminum oxide.

11-23. (Cancelled)

24. (Original) A method for producing a semiconductor light emitting device comprising the steps of:

- (j) preparing a group II-VI compound semiconductor substrate;
- (k) stacking a buffer layer of gallium nitride type compound semiconductor on a principal plane of the group II-VI compound semiconductor substrate;
- (l) stacking on the buffer layer in sequence a lower cladding layer, an active layer, an upper cladding layer, and a cap layer, these layers being made of gallium nitride semiconductor, with matching crystal lattice of each layer to one another;
- (m) forming electrodes on both the top of the cap layer and the bottom of the group II-VI compound semiconductor substrate, whereby obtaining a semiconductor wafer having multilayer structure; and
- (n) cleaving the semiconductor wafer to chips.

25. (Original) The method for producing a semiconductor light emitting device of Claim 24, wherein the step of stacking the buffer layer is implemented by forming a low-temperature buffer layer at low temperature and then, by forming a high-temperature buffer layer at high temperature.

26. (Original) The method for producing a semiconductor light emitting device of Claim 24, wherein the buffer layers are made of n-type GaN, the lower cladding layer is made of n-type $\text{Al}_x\text{Ga}_{1-x}\text{N}$ ($0 < x < 1$), the active layer is made of $\text{Ga}_n\text{In}_{1-n}\text{N}$ ($0 < n \leq 1$), the upper cladding layer is made of p-type $\text{Al}_x\text{Ga}_{1-x}\text{N}$ ($0 < x < 1$), and the cap layer is made of p-type GaN.

27. (Previously Presented) The method for producing a semiconductor light emitting device of Claim 24, wherein the group II-VI compound semiconductor substrate having a principal plane, the principal plane being a top surface comprising group VI atoms of the group II-VI compound semiconductor substrate, is prepared.

28-33. (Cancelled)

34. (Currently Amended) A method for producing a semiconductor light emitting device comprising the steps of:

(o) preparing a group III-V compound semiconductor substrate, said group III-V compound semiconductor selected from the group consisting of GaAs, InAs, GaP, and InP;

(p) stacking a buffer layer of gallium nitride type compound semiconductor on a principal plane of the group III-V compound semiconductor substrate;

(q) stacking on the buffer layers in sequence a lower cladding layer, an active layer, an upper cladding layer, and a cap layer, these layers being made of gallium nitride type semiconductor, with matching crystal lattice of each layer to one another;

(r) forming electrodes on both the top of the cap layer and the bottom of the group III-V compound semiconductor substrate, whereby obtaining a semiconductor wafer having multilayer structure; and

(s) cleaving the semiconductor wafer to chips, ~~wherein the group V element is selected from the group consisting of P and As.~~

35. (Original) The method for producing semiconductor light emitting device of Claim 34, wherein the step of forming the buffer layers is implemented by forming a low-temperature buffer layer at low temperature and then, by forming a high-temperature buffer layer at high temperature.

36. (Canceled)

37. (Original) The method for producing the semiconductor light emitting device of Claim 34, wherein the group III-V compound semiconductor substrate having a principal plane, the principal plane being a top surface comprising group V atoms of the group III-V compound semiconductor substrate, is prepared.